

Anthropogenic and volcanic contributions to the tropospheric and stratospheric sulfate aerosols Mian Chin, Qian Tan, Thomas Diehl

We investigate anthropogenic and volcanic contributions to sulfate aerosol in the atmosphere through modeling and analysis of Aura data. We use a global model GOCART to simulate SO₂ and sulfate aerosol from 2000 to 2010 with the new anthropogenic and volcanic emission estimates to assess the origin of sulfate aerosols in the atmosphere. We will compare the model results with SO₂ data from OMI and MLS instrument on Aura, and aerosol vertical profiles from CALIPSO. Our goal is to understand the decadal trends of observed tropospheric and stratospheric aerosols.